

HYDROGELS FOR ORTHOPEDIC REPAIR

Abstract of the Disclosure

Hydrogels intended for orthopedic applications, including repair and regeneration of cartilage, bone, joint surfaces and related tissues, must possess greater strength and toughness than hydrogels used in soft tissue repair. A hydrogel formulation is provided which has high strength, toughness, a suitable mechanical modulus and low equilibrium hydration. It may also have controlled porosity or degradation time. It can be made to polymerize *in situ* with high (“good” to “excellent”) adherence to target tissue or surfaces. A preferred formulation for forming such gels comprises 40 to 80% by weight of a low-molecular weight polar monomer and 30 to 10% of a hydrophilic macromeric crosslinker.